

REMARKS/ARGUMENTS

Favorable reconsideration of this Application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-12 are pending in the Application. Claims 1-12 are amended by the present Amendment without the introduction of any new matter in light of the support found in the specification at page 20, line 12 - page 21, line 1, for example.

This outstanding Office Action, mailed on February 10, 2005, presented a provisional objection to claims 6 and 8 as being substantial duplicates and a rejection of Claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over Udagawa (U.S. Patent No. 6,195,125, Udagawa) in view of Tanaka et al. (U.S. Patent No. 4,884,090, Tanaka).

Initially, applicants acknowledge with gratitude the discussion held with Examiner Aggarwal on April 5, 2005.

During the above-noted discussion, Applicants' representative pointed out that neither Udagawa nor Tanaka taught the claimed comparing of a reference voltage corresponding to a predetermined amount of displacement of the imaging device with the piezoelectric element voltage. Also noted to be missing from these references was any teaching or suggestion of the claimed providing of an output when the detected piezoelectric element voltage was less than the reference voltage, which output is then used trigger the charging of the piezoelectric element from the capacitor storage device also providing energy to the strobe.

It was further emphasized that to whatever extent that Tanaka teaches a comparing unit (urged relative to Figure 5b and microcomputer 21 in the outstanding Action) configured to compare a reference voltage (urged to be 100 volts in the outstanding Action) to another voltage, this other voltage is taught to be a voltage on a capacitor, not a piezoelectric element voltage.

The Examiner indicated reliance on the Tanaka comparing unit teachings appearing at col. 10, lines 3-16, and further on the output NO of step #50 in Figure 6. Applicants' representative urged that this Tanaka comparing unit still fell short of teaching the "comparing unit" of the claims because of the further claimed requirement that the "comparing unit" was to provide an output indicating that the piezoelectric element voltage is less than the reference voltage, while the disclosure at 10, lines 3-16, was that an output from a "second voltage detector" indicates if "the voltage of the main capacitor of the light emitting circuit is higher than 100 volts" (emphasis added). Thus, it was urged that the voltage of the "main capacitor" is taught to be checked by the "second voltage detector" to see if it has reached 100 volts and, if it has not, the "main capacitor" charging is continued until "the signal from the second voltage detector is at the high level" (col. 10, lines 20-22). If this high level is present, charging of the "main capacitor" stops.

However, the Examiner noted that the specification disclosure as to the showing of Figure 5 related to detecting the divider voltage V_p that could not be said to be the actual voltage on the piezoelectric element 24. The Examiner further indicated that the claims were thus being interpreted to only require comparing a voltage to be applied to the piezoelectric element, like the voltage on the capacitor that Tanaka teaches to be detected and then applied to the piezoelectric element disclosed as Bi in col. 6, lines 8-18 (noted in the outstanding Action).

To even more clearly point out the differences between the present invention and Tanaka, the claims have now been amended to recite, in various similar ways, the presence of a detecting circuit or means that will detect a representative voltage that is further recited to be indicative of a level of voltage presently being applied to the piezoelectric element. Turning to the teachings and fair suggestions of Tanaka, it is clear that monitoring the voltage on the main capacitor to detect when it is higher than 100 volts as taught by col. 10, lines 3-

32 of Tanaka has nothing to do with any voltage that can be reasonably said to be indicative of the voltage level that is presently being applied to the piezoelectric member. The voltage on the main capacitor of Tanaka that is detected is clearly not presently being applied to the piezoelectric member. Accordingly, even if the artisan had a valid reason to modify Udagawa by the capacitor voltage detection taught by Tanaka, it is clear that the invention of Claims 1-12 would not be the result.

In addition, Applicants note that the amendment to Claim 8 to require “means plus function” language under the sixth paragraph of 35 U.S.C. §112 clearly removes any question as to duplicated subject matter relative to Claim 6 that does not invoke the sixth paragraph of 35 U.S.C. §112 and is, thus, of clearly different scope.

Besides the above-noted failure of Tanaka to teach or suggest the claimed detecting circuit or means that will detect a representative voltage that is further recited to be indicative of a level of voltage presently being applied to the piezoelectric element, it is not clear where the PTO finds a teaching of a “comparator” to compare the main capacitor voltage to the 100 volt level noted in col. 10, lines 3-22. What Tanaka actually teaches is a “second voltage detector” to detect the voltage directly, not any comparison using microcomputer 21 as incorrectly alleged in the outstanding Action. As voltage detectors using Zener diodes to provide detection of a desired voltage level were well-known, it cannot be said to be inherent that a voltage detector using a comparator and separate reference voltage must be used.

Moreover, the reasoning for suggesting motivation to combine Tanaka and Udagawa presented in the third full paragraph on page 4 of the outstanding Action relies on adapting Udagawa to include the Tanaka main capacitor voltage detection to insure that “if the main capacitor discharges below a certain voltage, it can be sufficiently charged with the method taught in Tanaka.” However, following such a teaching to detect the voltage on the main capacitor leads away from the subject matter of the present invention.

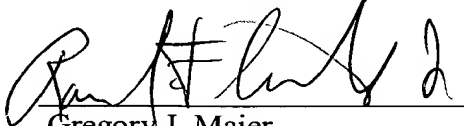
Furthermore, in the present invention, the reference voltage is a voltage that is required to displace the imaging device by a predetermined distance and judgment as to whether or not the imaging device will be displaced by the predetermined distance is made by comparing the representative voltage indicative of a present voltage level being applied to the piezoelectric element with the reference voltage. As the piezoelectric element used in Goto is to drive the shutter, as is that of Tanaka, it is further clear that neither Goto or Tanaka have any teaching or suggestion pointing to any reason for displacement of the imaging device by a predetermined distance. Therefore, the position in the outstanding Action that the present claimed inventive subject matter of Claims 1-12 would have been obvious over Goto in view of Tanaka is further without merit.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-12 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representatives at the below listed telephone number.

Respectfully submitted,

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